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ABSTRACT

The extent to which Colorado state universities and colleges coordinate master plans, program reviews, and methods for allocating faculty to programs was surveyed. Thirty-six state universities and seven state or community colleges participated. Seventy-five percent of the state universities believed that campus master plans and program reviews/evaluations can be meaningfully coordinated, and 72 percent felt program reviews/evaluations will be used increasingly by the states in the 1980s. Fewer (56 percent) of the university respondents believed that formulas or specified methods for the allocation of full-time equivalent faculty will increase on campuses in the 1980s. The responses from the state colleges or community colleges followed the same general pattern as that of the state universities. It was found that 81 percent of the state universities have written goals or objectives, and 62 percent have developed master plans. Even though a high proportion of the researcher/planners believed master plans are important, 38 percent of the institutions do not have master plans. Academic program reviews/evaluations occur on most of the campuses (94 percent), but the frequency of the reviews is varied. Only 25 percent of the institutions use a formula or specified method for the allocation of faculty to academic programs. The responses reveal that linking master plan, program reviews, and formulas or methods for faculty allocations is not widely done. Forty-two percent of the universities and 43 percent of the colleges relate program reviews to master plans, but only 17 percent of the universities have formulas or methods for faculty allocations that are related to master plans and the results of program reviews. (SW)

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THE USE OF INTER-LINKED MASTER PLANS, PROGRAM REVIEWS, AND METHODS/FORMULAS FOR FACULTY ALLOCATIONS TO PROGRAMS

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THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

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Mary Corcoran
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ABSTRACT

Postsecondary institutions and their planners are often preoccupied with reacting to exigencies. However, the necessity for these reactions provides an opportunity for institutions to partially guide their future by the development of inter-linked master plans, program reviews, and methods for the allocations of faculty.

A survey of the main campuses of all state universities showed that the concept of these inter-linked relationships is not widely implemented.

The exigencies of the 1980s may force institutions to plan master plans, program reviews, and the use of faculty activity analyses in a manner that provides for inter-linked relationships.

"Hegel once wrote that 'Hell is truth seen too late.' Looking ahead is a matter of leadership, of trying to seize hold of the future and to guide it, and not just to react to what otherwise will happen." This admonition is in the final report of the Carnegie Council on Policy Studies in Higher Education (1980), as it views the next twenty years in Higher Education.

Postsecondary educational institutions and their institutional researchers and planners are often preoccupied with responding to exigent situations. This tendency can be perpetuated and accelerated in the 1980s because of continued fiscal problems resulting from inflation and declining enrollments. Problems such as the use of faculty resources are subject to the reactive tendency. In the growth period of the 1960s, most institutions added faculty and programs in response to increased enrollments. It was not until the 1970s when retrenchment was forced by legislative appropriation committees that institutions gave more attention to program reviews-Harcleroad (1980, p.13), the use of faculty resources, and formulas for faculty allocations. Thus, postsecondary education was reactive to the exigencies of the 1970s.

Institutions cannot avoid a reactive stance. They cannot completely guide their futures because they cannot finally determine the acts of legislative committees or state coordinating boards. But they can provide the leadership of educators in articulating the purposes and goals of higher education and the impacts of the acts of state committees on the realization of these goals. However, these goals may need to be redefined. Stadtman (1980, p. 176) reports (Carnegie Council Surveys, 1978) that college and university presidents ranked "redefining goals of higher education" as second among the issues facing American higher education between 1980-2000. Institutions can also partially determine how state actions will affect their programs and the achievement of institutional goals and purposes. Consequently,

being reactive to exigencies may open a way for an institution to guide its future. However, as an institution attempts to guide its future, there are three prerequisites which need consideration:

1. The development of an academic master plan that states the institution's roles and mission, goals and objectives, and program priorities. The master plan serves as a basis for the articulation of the purposes of higher education as they relate to a specific institution.
2. The development of methods for program evaluations that include judgments about quality, as well as quantitative data, related to the institution's role and mission, goals and objectives, and priorities.
3. The development of faculty allocation plans or formulas for use within the institution that are correlated with an existing state appropriation formula but which implement the master plan, decisions related to the results of program evaluations, and which attempt to sustain the quality of programs in relationship to institutional priorities.

Inter-linked Master Plans, Program Reviews, and Faculty Allocations

Institutional master plans, program reviews/evaluations, and methods or formulas for the allocations of faculty to programs need to be linked together if the institutions' goals/objectives and mission are to have a cutting edge. The master plan can provide a general direction for the institution and it should include some flexible but specific plans for a period of time, e.g. five years, that show how the institution plans to implement goals, objectives, and mission. Annual or biennial program reviews or evaluations should be designed to show more specifically how the individual academic programs

fit into and contribute to the implementation plans. The method for the allocations of faculty should be designed to use faculty resources in a manner that reflects the master plan and the results of program reviews/evaluations.

Presently the political cross-currents within an institution may well impede the development of inter-linked relationships of master plans, evaluations/reviews, and faculty allocations. However, as institutions move through the 1980s, faculties and administrators may find that inflation, decreased student demand, competition for funds, and increased numbers of educational programs in private business will force consideration of these factors. As institutional researchers and planners consult with institutional leaders and decision-makers, there is an opportunity to think in these terms and attempt to place these considerations in the political milieu that decision-makers face.

Survey of Institutions

In an attempt to discover how many institutions have master plans, program reviews/evaluations, and methods for faculty allocations to programs and if there are any linked relationships between them, Henard (1981) surveyed the institutional researchers or planners of the main campuses of all of the state universities. Though the survey focused on universities, a small random sample of geographically distributed state colleges and community colleges was also surveyed in order to determine if there may be discernible differences between state universities and these institutions regarding the relationships of master plans, program reviews, and methods for allocating faculty. The researchers/planners were also asked to respond to statements about the importance of these endeavors for institutions in the 1980s. Responses were received from 36 (72 percent) of the fifty state universities

and from seven (70 percent) of the 10 state colleges or community colleges surveyed.

The results show that 75 percent of the state university respondents believe that campus master plans and programs reviews/evaluations can be related in a meaningful manner. Seventy-five percent agree or strongly agree (SA=32 percent) that it is important to have a master plan and 83 percent agree or strongly agree (SA=28 percent) that a master plan can give an institution a sense of direction in the 1980s. Program reviews/evaluations will be used increasingly by the state in the 1980s, according to the responses of 72 percent of the state university researchers/planners and 78 percent believe program reviews can provide valuable information that assists in making allocations of faculty. Fewer numbers of the university respondents (56 percent) believe formulas or specified methods for the allocations of FTE faculty will increase on campuses in the 1980s and 44 percent agree that formulas for the appropriations of FTE faculty will be used increasingly by the state in the 1980s. In comparison, Henard (1979, p. 4) reported that 90 percent of the executive officers of state commissions or boards of higher education expect the states to use formulas.

The responses from the state colleges or community colleges follow the same general pattern as those from the state universities, with 86 percent in agreement about the meaningful relationship of master plans and program reviews, and all but one respondent agrees that master plans are important and can give a sense of direction in the 1980s. All agree that program reviews assist in making faculty allocations and 71 percent expect the states to use them in the 1980s. Eighty-six percent believe formulas for faculty allocations will be used increasingly on campuses in the 1980s and 57 percent agree that they will be used by the state.

Because of the small sample of state colleges and community colleges, caution is needed in making generalizations. However, the patterns of responses generally follow those of the universities. Therefore, instead of giving detailed responses on all items, a summary of differences will be presented following the results of university responses.

Master Plan Contents, Methods of Development and Approval

The institutional researchers/planners were asked if their institution (campus) has written goals/objectives, if it has a master plan and if so what are the contents. The questionnaire asked whether existing master plans were developed by the central administration or by a representative committee including the following; faculty, administration, deans, students, and "other." Other requested information was: by whom was the master plan approved, does it include a plan for revision/update, and a plan for program evaluation.

Eighty-one percent of the responding state universities have written goals/objectives. Master plans have been developed on 62 percent of the university campuses. The responses related to existing goals/objectives may be compared to the 1978 survey of the Carnegie Council (Stadtman 1980, p.172) that included college and university presidents who listed 15 desired changes at their institutions. "Institutional goals defined" ranked fourth among all institutions. Twelve percent of Research University I and 22 percent of Research University II presidents gave this response.

Even though a high proportion of researcher/planners believe master plans are important and can give an institution a sense of direction, 38 percent of the institutions do not have master plans. An explanation might be that all institutional leadership has not experienced internal or external pressures that prompted their development.

All of the existing master plans in the universities include goals/objectives and role-mission statements for the campus. Less than two-thirds of the university master plans include goals/objectives for degree programs (61 percent), program priorities (65 percent), and a history of the campus (61 percent). More than one-half (52 percent) include a descriptive profile of students, 43 percent have a profile of faculty, and one-third include a description of the organizational structure.

Fifty-seven percent of the university master plans have program planning and projections for a future period of time. The future period of time for planning varies with most being either five years or 6-10 years. About one-half of the universities include the following in program planning and projections: new programs, plans for reduction of existing programs, numbers of faculty needed, estimated student demand for programs, and physical facilities and equipment needed. Nearly one-fourth include varied "other" items.

Seventy-eight percent of the master plans have revision/update plans and 43 percent include designs for program evaluations.

Fifty-seven percent of the university master plans were developed with the participation of faculty, administration and deans; about one-half included students. Thirty percent were developed by the central administration of the campus and 13 percent by "other" committees.

Most of the university master plans (57 percent) were approved by the governing boards, and the campus central administration. Thirty-five percent received approval from the system central administration,and 30 percent by the state coordinating board or board of education.

Academic Program Reviews/Evaluations

Academic program reviews/evaluations occur on most all of the campuses

surveyed (94 percent). The frequency of the reviews is varied, with 32 percent occurring either annually or biennially; 26 percent are related to accreditation review (e.g., every ten years); and over one-half (59 percent) indicate they also have reviews at "other" frequencies.

Program reviews/evaluations for the universities are required by 42 percent of the state coordinating boards or boards of education, by 28 percent of the governing boards, and 36 percent of the campus or system central administrations. In addition, 17 percent report that "other" agencies require program reviews and only three percent are for state performance audits.

About one-half (47 percent) of the university program reviews/evaluations are related to budget requests made by the institutions, 18 percent to appropriation decisions of the state legislature, and 41 percent are related to "other" purposes.

Seventy-one percent of the program reviews/evaluations include qualitative and quantitative measures, 15 percent have only quantitative measures, and there was no response from the remainder of the institutions. The definitions of quality and the examples of quality are extremely varied. Generally, the definitions of quality include the degree of "excellence" in faculty, students, programs, facilities, or in the development and dissemination of knowledge; value to the community, state, region, nation, and to the institution in carrying out institutional mission/goals/objectives; achievement of program objectives; and acceptable ratings among peers or evaluators. The most frequently mentioned examples of quality are students' academic achievements (e.g., test scores), success of graduates, strengths of faculty and student applicants, types of grants and contracts obtained, publication records of faculty, and types of journals where articles are published. Other examples are research accomplishments, doctorate production and external

reputation; coherence of curricula and national ratings; teaching - peer reviews, students' evaluations, and student performance; and service to the university, public and professional organization.

Formulas or Methods for the Allocations of Faculty

Only 25 percent of the institutions use a formula or specified method for the allocations of faculty to academic programs. The formulas or methods are based on student-faculty ratios, student credit hours per FTE faculty, or on instructor credit hours. The results of program reviews are used and campus master plans affect two-thirds of the existing formulas/methods.

Forty-two percent of the state legislatures of responding universities use formulas for appropriating FTE faculty and they are based on either student-faculty ratios or student credit hours per FTE faculty and, in some cases, on both factors.

Fifty-eight percent of the institutions use faculty activity analyses (faculty self reports) that include time/activity related to instruction and most include research, creative work, and community service.

Comparison of State Universities and State/Community Colleges

The survey responses show that the major differences between the state universities and the state colleges/community colleges are that state legislatures do not use formulas for appropriations, the colleges do not have faculty activity analyses, and most all of the master plans do not include goals/objectives for degree programs. Though all state colleges and community colleges have program reviews/evaluations, none of the master plans include designs for the reviews and more, compared to universities, use only quantitative measures as criteria for reviews/evaluations (colleges = 71 percent; universities = 15 percent). Fewer of the colleges (43 percent; universities 65 percent) relate program reviews to their master plans,

campus goals/objectives, roles/mission, and program priorities.

Linked Relationships

The survey responses reveal that the concept of linked relationships between master plan, program reviews and formulas or methods for the allocations of faculty is not widely implemented. Forty-two percent of the university campuses and 43 percent of the state colleges and community colleges relate program reviews to master plans, but only 17 percent of the universities have formulas or methods for the allocations of faculty that are related to master plans and the results of program reviews. Twenty-nine percent of the colleges have formulas/methods and there is no relationship to program reviews. The master plan affects one existing formula/method.

Much can be learned from the experiences of institutions that have linked program objectives, reviews/evaluations, and faculty allocations. Munitz and Wright (1980) describe the systematic processes used by the University of Michigan, Michigan State University, and the University of Houston. Freeman and Simpson (1980) provide more detailed information about the process and experiences at Michigan State. Mims (1980) describes the use of planning related to resource allocations in the University of Michigan Priority Fund and the University of Oklahoma Excellence Fund.

Planning Master Plans and Program Reviews

There appears to be a dearth of available published information about institutional master plans. However, regarding institutional goals, Conrad (1974) pointed out that they are often implicit rather than explicit, and Kerr (1974, P. 9) described them as vague. Deutscher (1977) believes that organizations are rarely what they pretend to be by virtue of their state goals. Freeman and Simpson (1980, P. 53) affirm that planning needs "precisely de-

fined university goals and a means of transforming these goals into action."

If master plans and program reviews are to represent an institution there is need for the participation of faculty, deans, administrators, and perhaps students and staff. However, as Neff (1971, p.124) points out, university goals should ultimately be centrally derived because the total perspective is more than the sum of the desires of subgroups. This statement applies to master plans and program reviews that include and relate to institutional goals. Official acceptance is provided when they are approved by the campus administration, system administration, the governing board, and by the state coordinating board or board of education when the latter is required.

The participation by deans and faculty in planning can possibly reduce political overtones because of increased understanding and defensiveness can be worked out during the planning process. "Open communications with the academic community are imperative" - Freeman and Simpson (1980, p.54). Defensiveness is more apt to occur in relationship to program reviews or evaluations because their results are more apt to relate specifically to the allocations of faculty resources. Therefore, the planning of program reviews/evaluations needs to include the purposes, scope, design, the data and information to be obtained, the processes by which evaluations will occur, and descriptions of how the results of reviews/evaluations will be used. A participative planning approach can result in the data-information collection being tied to the purposes and the uses of the reviews. Participative planning makes possible an agreement on the sources of data to be used in the reviews/evaluations and identification of reliable and consistent data for comparisons of programs. The data problems in evaluations can be the inconsistency of different data sets. Confronting and working out such problems

in the planning stage prevents later claims, following the reviews, that the data is inaccurate or unreliable. Even when there is reliable data, the admonition of Freeman and Simpson (1980, p.51-52) should be heeded, "Do not become convinced that the data is reality. Leave room for the introduction and consideration of subjective issues and maintain a certain amount of skepticism toward even the most reliable data."

If the state legislature, governor's office, coordinating board, board of education or other state agency requires program reviews or evaluations, the institutions' plans need to include the collection of data and other information to satisfy these stipulated requirements. However, the point here is that if institutional program evaluations are to go beyond a reactive stance they will be designed for institutional purposes as well as meeting state requirements. Educational leadership, "seizing hold of the future and guiding it" in terms of the Carnegie Council admonition, can mean that program evaluations based on an institution's master plan are one way to preserve academic integrity, promote internal accountability, and to assist in making decisions about the uses of faculty resources that best align with institutional goals and objectives, roles and mission.

A Conceptual Frame-Work for Program Reviews

Program reviews/evaluations that are designed for institutional purposes will attempt to identify qualities of programs as well as quantitative factors and program productivity. Productivity and quantitative characteristics of a program must be viewed in relationship to the institution's available resources and established reasonable expectations of productivity. However, quantitative characteristics (e.g., numbers of student majors, student credit hours generated, degrees awarded) need to be viewed also in relationship to the qualities of the program. These qualities may include the degree of ex-

cellence attained, with excellence indicated by the academic achievement of students, the qualifications of faculty, and other factors. But other qualities that may be just as important for a campus are the degree of centrality to the institution's goals and objectives, role and mission; the coherence of a program evidenced by the integral relationship of its sub-fields; evidence of a well-designed array of courses with logical relationships; a planned design for the types of faculty needed; expectancies or outcomes in knowledge or skills for program completers; and, the contribution that a program makes in the development of an educated person and/or in career or occupational preparation.

Quantitative data such as credit hours taught, student credit hours generated, faculty salaries, cost per student credit hour, etc., can ordinarily be obtained from the institution's computer files and could best be generated centrally and provided for programs.

The implementation of this conceptual frame-work for program reviews/evaluations can provide a basis for judgments about the perceived needs for the numbers of faculty, the reasons they are needed, and an estimate of the related salary costs. These judgments can then be related to the results of the applications of methods/formulas for the allocation of faculty.

Formulas/Methods for Faculty Allocation

It is desirable that an institution have its own method or formula for the allocations of faculty to programs. The institution's method/formula needs to be reconciliable with an existing state formula and it should also be based on academic judgments about the numbers of faculty needed for a program. An institution's formula/method needs to take into account the relationship of a program to the master plan goals and objectives and the program priorities.

Most methods used for making faculty allocations are based on faculty workload (FWL) items such as credit hours taught, faculty contact hours, student credit hours generated, or faculty workload formulas. Henard (1978) examined the uses of these measures of faculty workload. The results show that a single faculty member's proportion of the total FWL of a college varies greatly when credit hours, contact hours, or student credit hours are used as measures. The FWL formulas provided more equitable comparisons of workload. This is due to the components of the formulas which differentiate types of instruction, e.g., lectures, labs, student supervision, etc. Weights or FWL units are assigned to these activities and to the levels of instruction - undergraduate and graduate. The disadvantage in using FWL formulas is that they are complex and it is difficult to communicate the results to those unaccustomed to their use. An additional disadvantage is that they ordinarily attribute workload units for research and community service to each faculty member regardless of actual productivity.

Another method for making faculty allocations to departments and programs is the use of faculty activity analyses (FAA), self reports by faculty members, that include hours per week of work and percent of time related to instruction, research, professional activities, community and institutional service. This method is simpler than FWL formulas for comparing the workload of individual faculty members and it provides information about all work activities. The disadvantage in the use of FAA is that self reports can be viewed with incredulity. However, LeLong (1974, p.14) stated that faculty reports have a remarkable consistency based on "thousands upon thousands in U.S. institutions as well as from their British and Canadian colleagues, and some surveys have been corroborated by more objective studies."

In addition to the hours of work per week, the reports of faculty

members ordinarily include specified activities; classes taught, the credit hours, academic level, and the number of enrolled students in each class; individual student instruction or supervision; a bibliography of varied types of publications or performances, exhibits, compositions; other research, writing or scholarly work; public service in a professional capacity; committee and administrative service to the institution; and, other scholarly or professional activities.

The reports of faculty members in a department can be tabulated and analyzed in reference to the results of the related program reviews and the master plan's goals/objectives and program priorities. In addition, the teaching loads of faculty members can be compared along with other achievements of each faculty member in relationship to the instructional load. Further, the time spent in an activity can be related to achievements in that activity. The results of these analyses can be used for planning the department's use of time/activities for an ensuing year and for requesting faculty allocations. Judgments about the number of allocations must be made after faculty resources have been appropriated to the institution. The institution can use the master plan as a general guide for judgments, with the additional combined use of the results of program reviews and faculty activity analyses. After institutional judgments are made, the department may need to revise its plan, providing first for instructional needs then distributing other faculty time to other activities, e.g. research and service. The workload of individuals can be proportioned to each activity within the context of the department's revised plan. Succeeding evaluations can be used for further adjustments in the use of faculty resources.

Instead of the use of average hours of work per week to plan the workload for a department or an individual, the percent of time may be used.

Dressel, Johnson, and Marcus (1970, p.210ff.) describe the use of faculty percent of time for departments and for individual faculty distributed across instruction, research, service, administration, and professional development. McLaughlin, Montgomery, Gravely, and Mahan (1981) researched another approach to measuring and planning workload. This research concentrates on the effort required for different modes of instruction (e.g., lecture, laboratory), different disciplines, class levels, and class sizes. Effort was determined by relating a specific class to a base score of 100, represented by a lower-division three-credit-hour class with 25 students.

Whether faculty workload is determined by average hours per week, percent of time, or effort, the FAA can be designed to correlate with formulas that may be used by the state in making appropriations of faculty to an institution. Most of these formulas (Henard, 1979) use student-faculty ratios, credit hours taught, or student credit hours per FTE faculty. If the FAA includes the credit hours taught and the number of students in each class, this information may be applied to state formulas.

Summary and Conclusions

Postsecondary institutions and their planners are often preoccupied with reacting to exigencies. However, the necessity for these reactions provides an opportunity for institutions to partially guide their future by the development of inter-linked master plans, program reviews, and methods for the allocations of faculty.

A survey of the main campuses of all state universities showed that the concept of these inter-linked relationships is not widely implemented.

The exigencies of the 1980s may force institutions to plan master plans, program reviews, and the use of faculty activity analyses in a manner that provides for inter-linked relationships.

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